Inspection Date:	January 18, 2012
Start:	9:00 am
Weather:	20's, Lightly Snowing
Site:	Trans Energy, Inc. – Lucey Site
Location:	Marshall County, WV

The Lucey Impoundment Site ("Site") was constructed by Trans Energy, Inc. (Trans Energy) and is located approximately 0.9 mile southeast of Fork Ridge (County Highway 17) and Glen Easton Ridge (County Highway 60) near Cameron, Marshall County, West Virginia. The Site is located on an unnamed tributary (UNT) of Burch Run, which flows approximately 1,700 lf (0.32 mile) to Burch Run, which flows approximately 4,400 lf (0.83 mile) to Grave Creek and then approximately 16.1 miles to the Ohio River. According to the Pittsburgh District of the U.S. Army Corps of Engineers ("USACE"), Grave Creek is the nearest traditional navigable water (TNW) approximately 1.1 miles above its mouth to the Ohio River. Distance from the Site to this TNW point is approximately 16.2 miles.

On January 18, 2012 representatives from the U.S. Environmental Protection Agency ("EPA") and the USACE conducted a Clean Water Act Section 404 inspection at the freshwater impoundment along with representatives the West Virginia Department of Environmental Protection's ("WVDEP") Environmental Enforcement, Dam Safety, Oil and Gas, and Water and Waste offices. Trans Energy representatives and counsel, and the landowner, Mr. Robert Christopher, were also present. See sign-in sheet for complete list of attendees.

WVDEP had conducted aerial surveillance of natural gas activity in the area, and had identified this site as having possible 404 impacts. In a phone conversation on 12/29/2011 between Stephanie Andreescu of EPA and Leslie Gearheart, Trans Energy's Vice President of Operations, prior to the site visit, Ms. Gearhart indicated that the impoundment was constructed for the landowner by Trans Energy as part of the lease agreement. The impoundment was also to be used by Trans Energy for water withdrawal.

During the site inspection, impacts to 4 streams (WC1 and 3 tributaries) were identified from the impoundment and associated activities. A bridge and dock had been constructed on the 1.7-acre impounded waterbody. Trans Energy stated that the impoundment was constructed in Fall 2010. No wetland or stream delineations were conducted at the Site prior to construction.

According to Soil Survey Geographic Database (SSURGO) mapping, the majority of the Site is underlain by Sensabaugh silt loam (3-8 percent slopes, rarely flooded). Sensabaugh soils are well-drained soils found on alluvial fans on hillside floodplains. Parent material consists of gravelly fine-loamy alluvium derived from interbedded sedimentary rock. Impacts to WC2 are underlain by the Culleoka-Dormont complex (CmD), a mixture of Culleoka (45%) and Dormont (40%) components. Culleoka and Dormont soils are found on hillslopes, ridges, and structural benches on hills with parent material consisting of nonacid residuum weathered from shale and siltstone. Culleoka soils have parent material consisting also of fine-grained sandstone. None of the above soils meet hydric criteria.

WC1 (Downstream)

WC1 is a USGS-mapped "blue-line" stream. The National Hydrography Dataset (NHD) identifies the stream as perennial. WC1 is the main stem of the impounded stream. The stream is an unnamed tributary to Burch Run, a tributary to Grave Creek, which flows to the Ohio River. Upstream of the impoundment, WC1 had well-defined bed and bank with substrate dominated by cobble. Macroinvertebrate taxa included Ephemeroptera, Plecoptera, and Trichoptera. The flow regime was determined to be perennial with well developed obligate aquatic fauna.

The width of the berm for the dam was roughly estimated to be 120-ft, and it appeared to be approximately 25-ft high. The length of the berm was measured to be approximately 150-ft. Water was discharging at high velocity from the impoundment to the stream via a 36-in corrugated plastic pipe below the dam. The stream substrate below the pipe had been concreted to stabilize the area, which impacted approximately 60-ft of stream. Below the concrete, both vertical and lateral stream erosion were evident. A control valve structure was located below the dam. Backwater from the impoundment impacted the stream north of the bridge by widening the stream and slowing flow, which caused the reach to also be substantially more silty than upstream. The impact extended to the confluence of WC1 and WC3 (approx. 110-ft.).

WC2

On the western side of the impoundment, an unnamed tributary to WC1 had been piped under the gravel access road and disturbed from the impoundment of WC1. Approximately 140-ft was culverted via a 28-in plastic pipe to the impoundment; aerial photos show at least 150-ft of the former stream is now within the existing impoundment. Near the upstream end of the pipe, the stream channel width ranged from 5 to 10 lf bank to bank. Macroinvertebrate taxa included Ephemeroptera, Trichoptera, and Diptera. The flow regime was determined to be perennial with well developed obligate aquatic fauna.

WC3

Upstream of the large impoundment of WC1, the USGS quadrangle maps show a "blue line" tributary to WC1. The NHD identifies this stream as perennial. The stream was approximately 15-ft wide above the pond. Macroinvertebrate taxa included Ephemeroptera, Plecoptera, Trichoptera, and Diptera. The flow regime was determined to be perennial with well developed obligate aquatic fauna. This stream had been excavated and piped to create a small impoundment upstream of the large impoundment of WC1. The outlet of the impoundment was a 40-ft corrugated pipe that discharged into the channel just above its confluence with WC1. Approximately 200-ft of stream had been impacted.

WC4

On the east side of the impoundment, a small stream had been piped. The pipe consisted of an 8-in diameter, 40-ft plastic pipe with about 25-ft fill over the pipe. The active channel was approximately 3-ft wide and >6-ft bank-to-bank. The stream appeared to be spring-fed and step pools had developed, indicating frequent flow. Macroinvertebrates indicative of at least

intermittent flow were collected and included Ephemeroptera, Plecoptera, Trichoptera, and Diptera.

USACE indicated that they would send a Cease and Desist order for the site. Based on both field measurements and geospatial analysis, total estimated stream impacts to the 4 streams were approximately 1620-ft.

Impact estimates (based on site measurements and GIS)

Stream	Estimated feet of impact
WC1 (UNT of Burch Run)	1090
WC2	300
WC3	160
WC4	70
Total	1620